## I. AMENDMENTS

**IN THE CLAIMS**

Cancel claims 2-5, 9, 17-20, 23-26, and 32-35 without prejudice to renewal.

Please enter the amendments to claims 1, 15, 21, and 30, as shown below.

Please enter new claims 36-37, as shown below.

1. (Currently Amended) A calorimetric device comprising

a) a U-shaped calorimeter tube having an inlet end and an outlet end, and mounted onto a support at the inlet end and the outlet end~~; and~~

~~b) a sensor,~~ wherein the calorimeter tube comprises a **bimetallic** ~~sensor~~ layer that **bends in response to** ~~detects~~ a temperature change in the calorimeter tube**;**

**b) a capacitive sensor that detects the bending of the bimetallic layer; and**

**c) an integrated heating device that provides current through the bimetallic layer to heat the calorimeter tube and maintain a substantially constant temperature based on detected bending of the bimetallic layer**.

2-5. (Canceled)

6. (Original) The device of claim 1, wherein the device detects temperature changes in the range of from about 1 pJ to about 1000 pJ.

7. (Previously presented) The device of claim 1, wherein the calorimeter tube has a total volume capacity in a range of from about 1 μl to about 1 ml.

8-10. (Cancelled)

11. (Previously presented) The device of claim 1, wherein the calorimeter tube is enclosed in a vacuum.

12. (Original) An array comprising a plurality of the device of claim 1.

13. (Original) The array of claim 12, further comprising a data storage means.

14. (Original) The array of claim 12, further comprising a data analysis means.

15. (Currently Amended) A method of detecting a temperature change that occurs in a process, the method comprising

introducing a sample comprising a chemical reactant, a biological entity, or a macromolecule into the device of claim 1; and

detecting **a bending of the bimetallic layer based on** a temperature change in the calorimeter tube**; and**

**providing current through the bimetallic layer to heat the reaction vessel and maintain a substantially constant temperature based on the detected bending of the bimetallic layer**.

16. (Original) The method of claim 15, wherein the process is selected from a chemical reaction, a biochemical reaction, a binding reaction, a physical process, a light-induced process, and a biological reaction.

17-20. (Canceled)

21. (Currently Amended) A calorimetric device comprising

a) a U-shaped reaction vessel having an inlet and an outlet, and mounted onto a support at or near the inlet and the outlet**, wherein the reaction vessel comprises a bimetallic layer that bends in response to a change in temperature**;

b) a **capacitive** sensor **that detects the bending of the bimetallic layer** ~~wherein the sensor detects temperature input into the reaction vessel and/or temperature output from the vessel required to maintain the reaction vessel at a substantially constant temperature~~; and

an integrated heating device **that provides current through the bimetallic layer** ~~used~~ to heat the reaction vessel and maintain a substantially constant temperature based on the detected **bending of the bimetallic layer** ~~temperature input and/or output~~.

22-29. (Cancelled)

30. (Currently Amended) A method of detecting a temperature change that occurs in a process, the method comprising

introducing a sample comprising a chemical reactant, a biological entity, or a macromolecule into the device of claim 21; and

detecting **a bending of the bimetallic layer based on** a temperature change in the reaction vessel**; and**

**providing current through the bimetallic layer to heat the reaction vessel and maintain a substantially constant temperature based on the detected bending of the bimetallic layer**.

31. (Previously presented) The method of claim 30, wherein the process is selected from a chemical reaction, a biochemical reaction, a binding reaction, a physical process, a light-induced process, and a biological reaction.

32-35. (Canceled)

36. (New) The device of claim 21, wherein the reaction vessel has a total volume capacity in a range of from about 1 μl to about 1 ml.

37. (New) The device of claim 21, wherein the reaction vessel is enclosed in a vacuum.